GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: February 24, 2003, 10:13:33 ; Search time 226.618 Seconds
(without alignments)
10583.354 Million cell updates/sec

Title: US-09-922-895-2
Perfect score: 1065
Sequence: 1 ATGACAACCTCACTAGATAC.....CGGAACTCTCTATTGTGTTT 1065

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2185239 seqs, 1125999159 residues

Total number of hits satisfying chosen parameters: 4370478

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : N_Geneseq_101002:*
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23: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
24: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	1065	100.0	1068	21	AAF21266	Human low adenosin
	2	1065	100.0	1068	21	AAA35144	Human adenosine re
	3	1065	100.0	1068	24	AAD25222	Human chemokine (C
	4	1065	100.0	1193	17	AAT31335	CC-chemokine recep
	5	1065	100.0	1193	19	AAV07403	Human C-C chemokin
	6	1065	100.0	1201	21	AAF21267	Human low adenosin
	7	1065	100.0	1201	21	AAA35145	Human adenosine re
	8	1065	100.0	1201	24	ABK84282	Human cDNA differe
	9	1065	100.0	1717	24	ABL67066	Thyroid cancer rel
	10	1065	100.0	1717	24	AAD25221	Human chemokine (C
	11	1065	100.0	1915	18	AAT85162	Human chemokine re
	12	1065	100.0	3958	21	AAF21269	Human low adenosin
	13	1065	100.0	3958	21	AAA35147	Human adenosine re
	14	1065	100.0	5099	18	AAT93601	Human eosinophil e
	15	1064.2	99.9	1717	24	AAD25245	Human chemokine (C
	16	1061.8	99.7	1068	23	ABI97977	Non-endogenous hum
	17	1061.8	99.7	1068	24	ABA94340	Human CC chemokine
	18	1061.8	99.7	1689	17	AAT31334	CC-chemokine recep
	19	1061.8	99.7	1689	18	AAT58783	Human C-C chemokin
	20	1061.8	99.7	1689	19	AAV07402	Human C-C chemokin
	21	1061.8	99.7	1689	21	AAF21268	Human low adenosin
	22	1061.8	99.7	1689	21	AAA35146	Human adenosine re
	23	1061.8	99.7	1689	24	ABL40462	Human C-C chemokin
	24	1053.8	98.9	1116	17	AAT31336	CC-chemokine recep
	25	1052.6	98.8	1116	19	AAV07404	Human C-C chemokin
	26	1039.2	97.6	1071	18	AAT79096	Human CCKR3 chemok
	27	997	93.6	3426	24	ABT04010	Human ovary specif
c	28	713	66.9	7201	24	ABL32337	Human immune syste
	29	637.8	59.9	7201	24	ABL32336	Human immune syste
	30	540.8	50.8	1065	18	AAT86154	Human MIP-1alpha/R
	31	540.8	50.8	1495	15	AAQ62695	C-C chemokine rece
	32	540.8	50.8	1495	21	AAF21264	Human low adenosin
	33	540.8	50.8	1495	21	AAA35142	Human adenosine re
	34	540.8	50.8	2156	18	AAT90384	Human MIP-1 alpha/
	35	540.8	50.8	2156	21	AAF21258	Human low adenosin
	36	540.8	50.8	2156	21	AAF21262	Human low adenosin
	37	540.8	50.8	2156	21	AAA35136	Human adenosine re
	38	540.8	50.8	2156	21	AAA35140	Human adenosine re
	39	540.8	50.8	2214	24	ABK83592	Human cDNA differe
	40	540.8	50.8	6606	21	AAF21265	Human low adenosin
	41	540.8	50.8	6606	21	AAA35143	Human adenosine re
	42	487.2	45.7	1544	18	AAT86839	cDNA encoding rat
	43	363.4	34.1	1056	22	AAD13198	Human G-protein ch
	44	363.4	34.1	1056	22	AAD13299	Human G-protein ch
	45	363.4	34.1	1056	24	ABK51870	DNA encoding human

ALIGNMENTS

RESULT 1
AAF21266
ID AAF21266 standard; DNA; 1068 BP.
XX
AC AAF21266;
XX
DT 14-MAR-2001 (first entry)
XX
DE Human low adenosine antisense oligonucleotide related sequence #2833.
XX
KW Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
KW human; airway disorder; bronchoconstriction; lung inflammation;
KW surfactant depletion; respiratory; bronchodilator; antiinflammatory;
KW immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
KW respiratory obstruction; pulmonary obstruction; impeded respiration;
KW surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS;
KW respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
KW pulmonary hypertension; emphysema; pulmonary transplantation rejection;
KW chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
KW cancer; ss.
XX
OS Homo sapiens.
XX
PN WO200062736-A2.
XX
PD 26-OCT-2000.
XX
PF 24-MAR-2000; 2000WO-US08020.
XX
PR 06-APR-1999; 99US-0127958.
XX
PA (UYEC-) UNIV EAST CAROLINA.

```
PA   (NYCE/) NYCE J W.
XX
PI   Nyce JW;
XX
DR   WPI; 2000-679539/66.
XX
PT   Low adenosine (A) content antisense oligonucleotides which do not
PT   trigger adenosine receptors during metabolism, useful e.g. for treating
PT   cancers and respiratory obstructions -
XX
PS   Disclosure; Page 1182; 1592pp; English.
XX
CC   The present invention describes low adenosine (A) content antisense
CC   oligonucleotides and compositions (I) comprising them. In the antisense
CC   oligonucleotides the A is replaced by a 'Universal' or alternative base.
CC   (I) can have respiratory, bronchodilator, antiinflammatory, analgesic,
CC   immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.
CC   The antisense oligonucleotides and (I) can be used to down-regulate the
CC   expression and or activity of target polypeptides associated with
CC   lung/respiratory disorders and malignancies, such as stimulating and
CC   activating peptide factors and transmitters, transcription factors,
CC   immunoglobulins and antibodies, antibody receptors, cytokines and
CC   chemokines, endogenously produced specific and non-specific enzymes,
CC   binding proteins, adhesion molecules and their receptors, cytokine and
CC   chemokine receptors, adenosine receptors, bradykinin receptors, central
CC   nervous system (CNS) and peripheral nervous and non-nervous system
CC   receptors, CNS and peripheral nervous and non-nervous system peptide
CC   transmitters, defensins, growth factors, vasoactive peptides and
CC   receptors, binding proteins and malignancy associated proteins. The
CC   antisense oligonucleotides may be used in this way to treat disorders
CC   including respiratory obstruction (especially pulmonary obstruction
CC   and/or bronchoconstriction) and/or lung inflammation, allergy(ies)
CC   and/or surfactant hypoproduction which are associated with a disease or
CC   condition selected from pulmonary vasoconstriction, inflammation,
CC   allergies, asthma, impeded respiration, respiratory distress syndrome
CC   (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
CC   hypertension, emphysema, chronic obstructive pulmonary disease (COPD),
CC   pulmonary transplantation rejection, pulmonary infections, bronchitis,
CC   and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
CC   fragments and antisense oligonucleotides used in the exemplification of
CC   the present invention.
XX
SQ   Sequence 1068 BP; 231 A; 289 C; 243 G; 305 T; 0 other;

  Query Match           100.0%;  Score 1065;  DB 21;  Length 1068;
  Best Local Similarity  100.0%;  Pred. No. 1.6e-313;
  Matches 1065;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60

Qy      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
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Db      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120

Qy     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180

Qy     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240

Qy     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300

Qy     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360

Qy     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420

Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
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Db     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480

Qy     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540

Qy     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600

Qy     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660

Qy     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720

Qy     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780

Qy     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840

Qy     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900

Qy     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
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Db     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960

Qy     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020

Qy    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
           |||||||||||||||||||||||||||||||||||||||||||||
Db    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065


RESULT 2
AAA35144
ID   AAA35144 standard; DNA; 1068 BP.
XX
AC   AAA35144;
XX
DT   28-JUL-2000  (first entry)
XX
DE   Human adenosine receptor related polynucleotide 2nd SEQ ID NO:18.
XX
KW   Human; adenosine receptor; low adenosine antisense oligonucleotide;
KW   phosphorothioate; impaired respiration; inflammation; allergy;
KW   allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
KW   antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway;
KW   lung disease; ischaemic condition; pulmonary vasoconstriction; asthma;
KW   respiratory distress syndrome; pain; cystic fibrosis; emphysema;
KW   pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
KW   cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
XX
OS   Homo sapiens.
XX
PN   WO200009525-A2.
XX
PD   24-FEB-2000.
XX
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PF   03-AUG-1999;   99WO-US17712.
XX
PR   03-AUG-1998;   98US-0095212.
XX
PA   (UYEC-) UNIV EAST CAROLINA.
XX
PI   Nyce JW;
XX
DR   WPI; 2000-205971/18.
XX
PT   New antisense oligonucleotides useful for treating e.g. pulmonary
PT   vasoconstriction, inflammation, allergies, asthma, hypertension,
PT   bronchitis, emphysema, respiratory distress syndrome, ischemia or
PT   cancers -
XX
PS   Disclosure; Page 1102; 1343pp; English.
XX
CC   The present invention describes a new composition comprising an
CC   antisense oligonucleotide (ON) with low adenosine (up to 15%), which
CC   targets nucleic acids involved in bronchoconstriction, allergies, and/or
CC   inflammation. The ON can have antiinflammatory, antiallergic,
CC   antiasthmatic, cytostatic and analgesic activities. The compositions are
CC   useful for the treatment of diseases associated with inflammation,
CC   impaired airways, including lung disease and diseases whose secondary
CC   effects afflict the lungs of a subject. They can be used for treating
CC   e.g. ischaemic conditions, pulmonary vasoconstriction, allergies,
CC   asthma, impeded respiration, respiratory distress syndrome, pain, cystic
CC   fibrosis, pulmonary hypertension, emphysema, chronic obstructive
CC   pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
CC   carcinomas, and cancers which may metastasise to the lungs, including
CC   breast and prostate cancer. The reduction of the adenosine content of
CC   the ONs reduces side effects. The A-containing ONs break down with the
CC   release of deoxyadenosine which activates adenosine receptors causing
CC   bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
CC   nucleotide sequences given in the sequence listing from the present
CC   invention, which correspond to SEQ ID NO:1 to 2815, and then the last
CC   185 sequences are also called SEQ ID NO:1 to 185, but the sequences
CC   differ from the previously named sequences. SEQ ID NO:11 to 1680
CC   (AAA32323 to AAA33992) are specifically claimed ONs from the present
CC   invention. N.B. Sequences given in the disclosure of the present
CC   invention do not match up with their corresponding SEQ ID NO: sequences
CC   given in the sequence listing.
XX
SQ   Sequence 1068 BP; 231 A; 289 C; 243 G; 305 T; 0 other;

  Query Match             100.0%;  Score 1065;  DB 21;  Length 1068;
  Best Local Similarity   100.0%;  Pred. No. 1.6e-313;
  Matches 1065;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60

Qy      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120

Qy     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
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Db     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180

Qy     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
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Db     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240

Qy     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300

Qy     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360

Qy     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420

Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
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Db     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480

Qy     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540

Qy     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600

Qy     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660

Qy     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
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Db     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720

Qy     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
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Qy     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
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Qy     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
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Qy     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
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Qy    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
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Db    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065


RESULT 3
AAD25222
ID   AAD25222 standard; cDNA; 1068 BP.
XX
AC   AAD25222;
XX
DT   12-MAR-2002  (first entry)
XX
DE   Human chemokine (C-C motif) receptor 3 (CCR3) cDNA.
XX
KW   Human; chemokine (C-C motif) receptor 3; CCR3 gene; haplotyping;
KW   genotyping; type IV hypersensitivity reaction; HIV-1; gene therapy;
KW   human immunodeficiency virus 1; single nucleotide polymorphism; SNP;
KW   chromosome 3p21.3; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   variation       replace (51, C)
FT                   /*tag= a
FT                   /standard_name= "Single nucleotide polymorphism (SNP)"
FT                   /note= "Polymorphic site (PS) 3"
FT   CDS             1..1068
FT                   /*tag= b
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FT                   /product= "Human CCR3 protein"
FT   variation       replace (1052, C)
FT                   /*tag=  c
FT                   /standard_name= "Single nucleotide polymorphism (SNP)"
FT                   /note= "Polymorphic site (PS) 4"
XX
PN   WO200187908-A2.
XX
PD   22-NOV-2001.
XX
PF   18-MAY-2001; 2001WO-US16278.
XX
PR   18-MAY-2000; 2000US-205191P.
XX
PA   (GENA-) GENAISSANCE PHARM INC.
XX
PI   Choi JY,  Kazemi A,  Koshy B;
XX
DR   WPI; 2002-055681/07.
DR   P-PSDB; AAE15320.
XX
PT   Isolated polymorphic variants of chemokine (C-C motif) receptor 3
PT   (CCR3) gene useful for studying function of CCR3, expressing the CCR3
PT   protein and to screen drugs to treat CCR3 activity-related diseases -
XX
PS   Claim 25a; Fig 2; 53pp; English.
XX
CC   The invention relates to genetic variants of human chemokine (C-C motif)
CC   receptor 3 (CCR3) gene. The invention also relates to compositions and
CC   methods for haplotyping and/or genotyping the CCR3 gene in an individual.
CC   Polynucleotides of the invention are useful for studying the expression
CC   and function of CCR3 and in expressing CCR3 proteins for use in screening
CC   candidate drugs to treat diseases related to CCR3 activity. They are also
CC   used in gene therapy. The polymorphism and haplotype data is useful for
CC   validating whether CCR3 is a suitable target for drugs to treat type IV
CC   hypersensitivity reactions and human immunodeficiency virus (HIV)-1,
CC   screening for such drugs and reducing bias cells in clinical trials of
CC   such drugs. The genotyping method is useful for determining whether an
CC   individual has one haplotype or haplotype pairs. The haplotyping method
CC   is useful for improving the efficiency and outcome of several steps in
CC   the discovery and development of drugs for treating diseases associated
CC   with CCR3 activity such as type IV hypersensitivity reactions and HIV-1.
CC   The present sequence is human CCR3 cDNA. The CCR3 gene is located on
CC   chromosome 3p21.3.
XX
SQ   Sequence 1068 BP; 231 A; 289 C; 243 G; 305 T; 0 other;

  Query Match            100.0%;  Score 1065;  DB 24;  Length 1068;
  Best Local Similarity  100.0%;  Pred. No. 1.6e-313;
  Matches 1065;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
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Db       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60

Qy      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
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Db      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120

Qy     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180

Qy     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
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Db     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240

Qy     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300

Qy     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360

Qy     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420

Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
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Db     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480

Qy     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540

Qy     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600

Qy     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
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Db     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660

Qy     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720

Qy     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780

Qy     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840

Qy     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
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Db     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900

Qy     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960

Qy     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020

Qy    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
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Db    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065


RESULT 4
AAT31335
ID   AAT31335 standard; cDNA; 1193 BP.
XX
AC   AAT31335;
XX
DT   15-NOV-1996  (first entry)
XX
DE   CC-chemokine receptor 3 cDNA clone.
XX
KW   CC-chemokine receptor 3; CKP-3; Eos-L2; inhibitor; antisense;
KW   antiinflammatory; eosinophil; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             92..1159
FT                   /*tag=  a
FT   variation       918..919
FT                   /*tag=  b
FT                   /note= "CKR-3 cDNA clone has GC at positions
FT                          918-919, coding for serine (AGC) at
```

```
FT                      position 276; a genomic clone has CG at
FT                      these positions, coding for threonine
FT                      (AGC)"
XX
PN   WO9622371-A2.
XX
PD   25-JUL-1996.
XX
PF   19-JAN-1996;   96WO-US00608.
XX
PR   19-JAN-1995;   95US-0375199.
XX
PA   (BGHM ) BRIGHAM & WOMENS HOSPITAL.
PA   (CHIL-) CHILDRENS MEDICAL CENT.
PA   (LEUK-) LEUKOSITE INC.
XX
PI   Gerard CJ,  Gerard NP,  Mackay CR,  Ponath PD,  Post TW;
PI   Qin S;
XX
DR   WPI; 1996-354528/35.
DR   P-PSDB; AAW03377.
XX
PT   Mammalian chemokine receptor-3 and related nucleic acids - useful to
PT   identify receptor inhibitors to treat inflammatory disease, e.g.
PT   autoimmune disorders, certain cancers, etc.
XX
PS   Claim 1; Page 111-113; 153pp; English.
XX
CC   A genomic DNA clone (AAT31335) codes for a novel receptor (AAW03377),
CC   designated Eos L2 or C-C chemokine receptor 3 (CKR-3), involved
CC   in leukocyte migration associated with inflammation.  It was
CC   isolated from a human library constructed from eosinophils obtd.
CC   from a patient with hyper-eosinophilic syndrome using a probe
CC   (p4 cDNA) encoding the MIP-1alpha/RANTES receptor.  A CKR-3
CC   genomic clone (AAT31334) was also isolated, and a consensus sequence
CC   is given in AAT31336.  The cDNA and genomic clones can be used for
CC   the prodn. of recombinant CKR-3 in host cells, or to design
CC   antisense sequences useful for treating inflammatory disease.
XX
SQ   Sequence 1193 BP; 274 A; 310 C; 275 G; 334 T; 0 other;

  Query Match             100.0%;  Score 1065;  DB 17;  Length 1193;
  Best Local Similarity   100.0%;  Pred. No. 1.6e-313;
  Matches 1065;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
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Qy      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     152 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 211

Qy     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     212 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 271

Qy     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     272 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 331

Qy     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     332 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 391

Qy     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     392 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 451

Qy     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     452 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 511

Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
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Db     512 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 571

Qy     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     572 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 631

Qy     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
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Db     632 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 691

Qy     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
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Db     692 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 751

Qy     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     752 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 811

Qy     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
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Db     812 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 871

Qy     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     872 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 931

Qy     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
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Db     932 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 991

Qy     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
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Db     992 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 1051

Qy     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
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Db    1052 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1111

Qy    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
          |||||||||||||||||||||||||||||||||||||||||||||
Db    1112 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1156


RESULT 5
AAV07403
ID   AAV07403 standard; cDNA; 1193 BP.
XX
AC   AAV07403;
XX
DT   28-SEP-1998  (first entry)
XX
DE   Human C-C chemokine receptor 3 cDNA.
XX
KW   C-C chemokine receptor 3; CKR-3; CCR3; Eos L2; human;
KW   G protein-coupled receptor; leukocyte; antibody; antagonist;
KW   inflammation; allergy; asthma; graft rejection; infection;
KW   autoimmune disease; drug screening; therapy; ds.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             92..1159
FT                   /*tag=  a
XX
PN   WO9814480-A1.
XX
PD   09-APR-1998.
XX
PF   24-SEP-1997;   97WO-US17103.
XX
PR   30-SEP-1996;   96US-0720565.
```

XX
PA (LEUK-) LEUKOSITE INC.
XX
PI Mackay CR, Ponath PD;
XX
DR WPI; 1998-286418/25.
DR P-PSDB; AAW51745.
XX
PT Antibodies to chemokine receptor-3 protein - useful for diagnosis
PT and treatment of inflammatory conditions, e.g. allergy, asthma,
PT autoimmune disease, graft rejection or cancer
XX
PS Example 8; Page 134-136; 185pp; English.
XX
CC This cDNA codes for novel human C-C chemokine receptor 3 (see
CC AAW51745), also designated CKR-3, CCR3 or Eos L2, that binds and
CC mediates chemotaxis in response to chemokines such as eotaxin,
CC RANTES and MCP-3. The cDNA was isolated from a human eosinophil
CC cDNA library constructed from eosinophils obtained from a patient
CC with hypereosinophilic syndrome, and using CKR-1 cDNA as probe. A
CC genomic DNA sequence (see AAV07402) is also provided as well as a
CC consensus sequence (see AAV07404) for CKR-3. The invention relates
CC to isolated and/or recombinant nucleic acids encoding CKR-3,
CC isolated or recombinant CKR-3 polypeptides, recombinant nucleic
CC acid constructs, host cells useful for production of recombinant
CC CKR-3 proteins, to antibodies reactive with the receptors, and to
CC methods of using these products to identify ligands, antagonists
CC and agonists of receptor function. Inhibitors of CKR-3 can be used
CC to treat: inflammatory or allergic diseases and conditions,
CC including respiratory allergic diseases such as asthma, allergic
CC rhinitis, hypersensitivity lung disease, hypersensitivity
CC pneumonitis, eosinophilic pneumonia (e.g. Loeffler's syndrome,
CC chronic eosinophilic pneumonia, interstitial lung disease (ILD)
CC e.g. idiopathic pulmonary fibrosis or ILD associated with
CC rheumatoid arthritis, systemic lupus erythematosus, ankylosing
CC spondylitis, systemic sclerosis, Sjogren's syndrome, polymyositis
CC or dermatomyositis), systemic anaphylaxis or hypersensitivity
CC responses, drug allergy, insect sting allergy, inflammatory bowel
CC disease, such as Crohn's disease and ulcerative colitis,
CC spondyloarthropathy, scleroderma, psoriasis, inflammatory
CC dermatosis such as dermatitis, eczema, atopic dermatitis,
CC allergic contact dermatitis, urticaria, vasculitis (e.g. necrotizing,
CC cutaneous and hypersensitivity vasculitis); eosinphilic myositis
CC and eosinophilic fasciitis; autoimmune diseases such as rheumatoid
CC arthritis, psoriatic arthritis, multiple sclerosis, systemic lupus
CC erythematosus, myasthenia gravis, juvenile onset diabetes,
CC glomerulonephritis, autoimmune thyroiditis and Behcet's disease;
CC graft rejection, including allograft rejection or graft-versus-host
CC disease; cancers with leukocyte infiltration of the skin or organs;
CC and also reperfusion injury, atherosclerosis, certain haematologic
CC malignancies, septic shock and endotoxic shock. Promoters of CKR-3
CC function can be used for treating: immunosuppression e.g. in AIDS
CC patients or individuals undergoing radiation therapy, chemotherapy,
CC therapy for autoimmune disease or other drug therapy, and
CC immunosuppression due congenital deficiency in receptor function or
CC other causes; and infectious diseases such as parasitic diseases,
CC including helminth infections, such as nematodes (round worms).
CC The agents can also be used for detection and diagnosis.
XX
SQ Sequence 1193 BP; 274 A; 310 C; 275 G; 334 T; 0 other;

Query Match 100.0%; Score 1065; DB 19; Length 1193;
Best Local Similarity 100.0%; Pred. No. 1.6e-313;
Matches 1065; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
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Db     92 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 151

Qy     61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    152 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 211

Qy    121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    212 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 271

Qy    181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    272 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 331

Qy    241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
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Db    332 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 391

Qy    301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    392 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 451

Qy    361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    452 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 511

Qy    421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    512 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 571

Qy    481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    572 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 631

Qy    541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    632 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 691

Qy    601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    692 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 751

Qy    661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    752 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 811

Qy    721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    812 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 871

Qy    781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    872 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 931

Qy    841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    932 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 991

Qy    901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
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Db    992 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 1051

Qy    961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
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Qy   1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
          |||||||||||||||||||||||||||||||||||||||||||||
Db   1112 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1156
```

RESULT 6
AAF21267
ID AAF21267 standard; DNA; 1201 BP.
XX
AC AAF21267;
XX
DT 14-MAR-2001 (first entry)
XX

DE Human low adenosine antisense oligonucleotide related sequence #2834.
XX
KW Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
KW human; airway disorder; bronchoconstriction; lung inflammation;
KW surfactant depletion; respiratory; bronchodilator; antiinflammatory;
KW immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
KW respiratory obstruction; pulmonary obstruction; impeded respiration;
KW surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS;
KW respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
KW pulmonary hypertension; emphysema; pulmonary transplantation rejection;
KW chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
KW cancer; ss.
XX
OS Homo sapiens.
XX
PN WO200062736-A2.
XX
PD 26-OCT-2000.
XX
PF 24-MAR-2000; 2000WO-US08020.
XX
PR 06-APR-1999; 99US-0127958.
XX
PA (UYEC-) UNIV EAST CAROLINA.
PA (NYCE/) NYCE J W.
XX
PI Nyce JW;
XX
DR WPI; 2000-679539/66.
XX
PT Low adenosine (A) content antisense oligonucleotides which do not
PT trigger adenosine receptors during metabolism, useful e.g. for treating
PT cancers and respiratory obstructions -
XX
PS Disclosure; Page 1182-1183; 1592pp; English.
XX
CC The present invention describes low adenosine (A) content antisense
CC oligonucleotides and compositions (I) comprising them. In the antisense
CC oligonucleotides the A is replaced by a 'Universal' or alternative base.
CC (I) can have respiratory, bronchodilator, antiinflammatory, analgesic,
CC immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.
CC The antisense oligonucleotides and (I) can be used to down-regulate the
CC expression and or activity of target polypeptides associated with
CC lung/respiratory disorders and malignancies, such as stimulating and
CC activating peptide factors and transmitters, transcription factors,
CC immunoglobulins and antibodies, antibody receptors, cytokines and
CC chemokines, endogenously produced specific and non-specific enzymes,
CC binding proteins, adhesion molecules and their receptors, cytokine and
CC chemokine receptors, adenosine receptors, bradykinin receptors, central
CC nervous system (CNS) and peripheral nervous and non-nervous system
CC receptors, CNS and peripheral nervous and non-nervous system peptide
CC transmitters, defensins, growth factors, vasoactive peptides and
CC receptors, binding proteins and malignancy associated proteins. The
CC antisense oligonucleotides may be used in this way to treat disorders
CC including respiratory obstruction (especially pulmonary obstruction
CC and/or bronchoconstriction) and/or lung inflammation, allergy(ies)
CC and/or surfactant hypoproduction which are associated with a disease or
CC condition selected from pulmonary vasoconstriction, inflammation,
CC allergies, asthma, impeded respiration, respiratory distress syndrome
CC (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
CC hypertension, emphysema, chronic obstructive pulmonary disease (COPD),
CC pulmonary transplantation rejection, pulmonary infections, bronchitis,
CC and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
CC fragments and antisense oligonucleotides used in the exemplification of
CC the present invention.
XX
SQ Sequence 1201 BP; 278 A; 320 C; 267 G; 336 T; 0 other;

Query Match 100.0%; Score 1065; DB 21; Length 1201;
Best Local Similarity 100.0%; Pred. No. 1.7e-313;
Matches 1065; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      32 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 91

Qy      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      92 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 151

Qy     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     152 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 211

Qy     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     212 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 271

Qy     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     272 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 331

Qy     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     332 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 391

Qy     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     392 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 451

Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     452 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 511

Qy     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     512 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 571

Qy     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     572 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 631

Qy     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     632 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 691

Qy     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     692 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 751

Qy     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     752 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 811

Qy     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     812 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 871

Qy     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     872 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 931

Qy     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     932 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 991

Qy     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     992 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1051

Qy    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
          |||||||||||||||||||||||||||||||||||||||||||||
Db    1052 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1096
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RESULT 7

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AAA35145
ID   AAA35145 standard; DNA; 1201 BP.
XX
AC   AAA35145;
XX
DT   28-JUL-2000  (first entry)
XX
DE   Human adenosine receptor related polynucleotide 2nd SEQ ID NO:19.
XX
KW   Human; adenosine receptor; low adenosine antisense oligonucleotide;
KW   phosphorothioate; impaired respiration; inflammation; allergy;
KW   allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
KW   antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway;
KW   lung disease; ischaemic condition; pulmonary vasoconstriction; asthma;
KW   respiratory distress syndrome; pain; cystic fibrosis; emphysema;
KW   pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
KW   cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
XX
OS   Homo sapiens.
XX
PN   WO200009525-A2.
XX
PD   24-FEB-2000.
XX
PF   03-AUG-1999;   99WO-US17712.
XX
PR   03-AUG-1998;   98US-0095212.
XX
PA   (UYEC-) UNIV EAST CAROLINA.
XX
PI   Nyce JW;
XX
DR   WPI; 2000-205971/18.
XX
PT   New antisense oligonucleotides useful for treating e.g. pulmonary
PT   vasoconstriction, inflammation, allergies, asthma, hypertension,
PT   bronchitis, emphysema, respiratory distress syndrome, ischemia or
PT   cancers -
XX
PS   Disclosure; Page 1102; 1343pp; English.
XX
CC   The present invention describes a new composition comprising an
CC   antisense oligonucleotide (ON) with low adenosine (up to 15%), which
CC   targets nucleic acids involved in bronchoconstriction, allergies, and/or
CC   inflammation. The ON can have antiinflammatory, antiallergic,
CC   antiasthmatic, cytostatic and analgesic activities. The compositions are
CC   useful for the treatment of diseases associated with inflammation,
CC   impaired airways, including lung disease and diseases whose secondary
CC   effects afflict the lungs of a subject. They can be used for treating
CC   e.g. ischaemic conditions, pulmonary vasoconstriction, allergies,
CC   asthma, impeded respiration, respiratory distress syndrome, pain, cystic
CC   fibrosis, pulmonary hypertension, emphysema, chronic obstructive
CC   pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
CC   carcinomas, and cancers which may metastasise to the lungs, including
CC   breast and prostate cancer. The reduction of the adenosine content of
CC   the ONs reduces side effects. The A-containing ONs break down with the
CC   release of deoxyadenosine which activates adenosine receptors causing
CC   bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
CC   nucleotide sequences given in the sequence listing from the present
CC   invention, which correspond to SEQ ID NO:1 to 2815, and then the last
CC   185 sequences are also called SEQ ID NO:1 to 185, but the sequences
CC   differ from the previously named sequences. SEQ ID NO:11 to 1680
CC   (AAA32323 to AAA33992) are specifically claimed ONs from the present
CC   invention. N.B. Sequences given in the disclosure of the present
CC   invention do not match up with their corresponding SEQ ID NO: sequences
CC   given in the sequence listing.
XX
SQ   Sequence 1201 BP; 278 A; 320 C; 267 G; 336 T; 0 other;

  Query Match            100.0%;  Score 1065;  DB 21;  Length 1201;
  Best Local Similarity  100.0%;  Pred. No. 1.7e-313;
  Matches 1065;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
Db      32 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 91

Qy      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
Db      92 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 151

Qy     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
Db     152 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 211

Qy     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
Db     212 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 271

Qy     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
Db     272 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 331

Qy     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
Db     332 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 391

Qy     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
Db     392 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 451

Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
Db     452 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 511

Qy     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
Db     512 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 571

Qy     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
Db     572 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 631

Qy     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
Db     632 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 691

Qy     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
Db     692 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 751

Qy     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
Db     752 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 811

Qy     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
Db     812 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 871

Qy     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
Db     872 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 931

Qy     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
Db     932 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 991

Qy     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
Db     992 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1051

Qy    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
Db    1052 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1096
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RESULT 8
ABK84282
ID   ABK84282 standard; cDNA; 1201 BP.
XX
AC   ABK84282;
XX
DT   14-AUG-2002  (first entry)
XX
DE   Human cDNA differentially expressed in granulocytic cells #853.
XX
KW   Human; ss; granulocytic cell; DNA chip; bacterial infection;
KW   viral infection; parasitic infection; protozoal infection;
KW   fungal infection; sterile inflammatory disease; psoriasis;
KW   rheumatoid arthritis; glomerulonephritis; asthma; thrombosis;
KW   cardiac reperfusion injury; renal reperfusion injury; ARDS;
KW   adult respiratory distress syndrome; inflammatory bowel disease;
KW   Crohn's disease; ulcerative colitis; periodontal disease;
KW   granulocyte activation; chronic inflammation; allergy.
XX
OS   Homo sapiens.
XX
PN   WO200228999-A2.
XX
PD   11-APR-2002.
XX
PF   03-OCT-2001; 2001WO-US30821.
XX
PR   03-OCT-2000; 2000US-237189P.
XX
PA   (GENE-) GENE LOGIC INC.
XX
PI   Beazer-Barclay Y,  Weissman SM,  Yamaga S,  Vockley J;
XX
DR   WPI; 2002-435328/46.
XX
PT   Detecting granulocyte activation by detecting differential expression
PT   of genes associated with granulocyte activation, which serves as
PT   diagnostic markers that is useful for monitoring disease states and
PT   drug toxicity  -
XX
PS   Claim 1; SEQ ID No 853; 114pp; English.
XX
CC   The invention relates to detecting (M1) granulocyte (GC) activation
CC   (GCA), by detecting the level of expression of gene(s) (Gs) identified by
CC   DNA chip analysis as given in the specification, and comparing
CC   the expression level to an expression level in an unactivated
CC   GC, where differential expression of Gs is indicative of GCA.
CC   Also included are modulating (M2) GA by contacting GC with an agent
CC   that alters the expression of at least one gene in Gs; (2) screening (M3)
CC   for an agent capable of modulating GCA or an inflammation (especially
CC   chronic) in a tissue, an allergic response in a subject, exposure of a
CC   subject to a pathogen or sterile inflammatory disease using the
CC   gene expression profile; (3) detecting (M4) an inflammation (especially
CC   chronic) in a tissue, an allergic response in a subject, exposure of a
CC   subject to a pathogen or sterile inflammatory disease, by detecting the
CC   level of expression in a sample of the tissue of gene(s) from Gs, where
CC   the level of expression of the gene is indicative of inflammation;
CC   (4) treating (M5) an inflammation (especially chronic) or in a tissue,
CC   an allergic response in a subject, exposure of a subject to a pathogen
CC   or sterile inflammatory disease, by contacting a tissue having
CC   inflammation with an agent that modulates the expression of gene(s)
CC   from Gs in the tissue. M1 is useful for detecting GCA; M2 is useful for
CC   modulating GA; M3 is useful for screening an agent capable of modulating
CC   GCA preferably in an inflammation in a tissue; M4 is useful for
CC   detecting an inflammation (especially chronic) in a tissue, an allergic
CC   response in a subject, exposure of a subject to a pathogen or sterile
CC   inflammatory disease (e.g. psoriasis, rheumatoid arthritis,
CC   glomerulonephritis, asthma, thrombosis, cardiac reperfusion injury, renal
CC   reperfusion injury, ARDS, adult respiratory distress syndrome,
CC   inflammatory bowel disease, Crohn's disease, ulcerative colitis,
CC   periodontal disease; also bacterial infection, viral infection,
CC   parasitic infection, protozoal infection, fungal infection and M5 is
CC   useful for treating one of the above conditions. The present
CC   sequence represents a gene differentially expressed in granulocytes.
CC   Note: The sequence data for this patent did not form part
CC   of the printed specification, but was obtained in electronic
CC   format directly from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence 1201 BP; 278 A; 320 C; 267 G; 336 T; 0 other;

  Query Match             100.0%;  Score 1065;  DB 24;  Length 1201;
  Best Local Similarity   100.0%;  Pred. No. 1.7e-313;
  Matches 1065;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      32 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 91

Qy      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      92 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 151

Qy     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     152 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 211

Qy     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     212 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 271

Qy     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     272 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 331

Qy     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     332 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 391

Qy     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     392 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 451

Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     452 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 511

Qy     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     512 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 571

Qy     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     572 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 631

Qy     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     632 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 691

Qy     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     692 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 751

Qy     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     752 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 811

Qy     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     812 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 871

Qy     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     872 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 931

Qy     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
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          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     932 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 991

Qy     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     992 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1051

Qy    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
          |||||||||||||||||||||||||||||||||||||||||||||
Db    1052 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1096


RESULT 9
ABL67066
ID   ABL67066 standard; DNA; 1717 BP.
XX
AC   ABL67066;
XX
DT   15-MAY-2002  (first entry)
XX
DE   Thyroid cancer related gene sequence SEQ ID NO:5403.
XX
KW   Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW   stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW   cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW   gene; ds.
XX
OS   Homo sapiens.
XX
PN   WO200194629-A2.
XX
PD   13-DEC-2001.
XX
PF   30-MAY-2001; 2001WO-US10838.
XX
PR   05-JUN-2000; 2000US-209473P.
PR   05-JUN-2000; 2000US-209531P.
PR   18-SEP-2000; 2000US-233133P.
PR   18-SEP-2000; 2000US-233617P.
PR   20-SEP-2000; 2000US-234009P.
PR   20-SEP-2000; 2000US-234034P.
PR   20-SEP-2000; 2000US-234052P.
PR   22-SEP-2000; 2000US-234509P.
PR   22-SEP-2000; 2000US-234567P.
PR   25-SEP-2000; 2000US-234923P.
PR   25-SEP-2000; 2000US-234924P.
PR   25-SEP-2000; 2000US-235077P.
PR   25-SEP-2000; 2000US-235082P.
PR   25-SEP-2000; 2000US-235134P.
PR   25-SEP-2000; 2000US-235280P.
PR   26-SEP-2000; 2000US-235637P.
PR   26-SEP-2000; 2000US-235638P.
PR   27-SEP-2000; 2000US-235711P.
PR   27-SEP-2000; 2000US-235720P.
PR   27-SEP-2000; 2000US-235840P.
PR   27-SEP-2000; 2000US-235863P.
PR   28-SEP-2000; 2000US-236028P.
PR   28-SEP-2000; 2000US-236032P.
PR   28-SEP-2000; 2000US-236033P.
PR   28-SEP-2000; 2000US-236034P.
PR   28-SEP-2000; 2000US-236109P.
PR   28-SEP-2000; 2000US-236111P.
PR   29-SEP-2000; 2000US-236842P.
PR   29-SEP-2000; 2000US-236891P.
PR   02-OCT-2000; 2000US-237172P.
PR   02-OCT-2000; 2000US-237173P.
PR   02-OCT-2000; 2000US-237278P.
PR   02-OCT-2000; 2000US-237294P.
PR   02-OCT-2000; 2000US-237295P.
PR   02-OCT-2000; 2000US-237316P.
PR   03-OCT-2000; 2000US-237425P.
PR   03-OCT-2000; 2000US-237598P.
PR   03-OCT-2000; 2000US-237604P.
PR   03-OCT-2000; 2000US-237606P.
PR   03-OCT-2000; 2000US-237608P.
PR   01-NOV-2000; 2000US-244867P.
PR   01-NOV-2000; 2000US-245084P.
XX
PA   (AVAL-) AVALON PHARM.
XX
PI   Young PE,  Augustus M,  Carter KC,  Ebner R,  Endress G,  Horrigan S;
PI   Soppet DR,  Weaver Z;
XX
DR   WPI; 2002-188264/24.
XX
PT   Screening for anti-neoplastic agent involves exposing cells to a
PT   chemical agent to be tested for anti-neoplastic activity, and
PT   determining a change in expression of a gene of a signature gene set  -
XX
PS   Claim 1; SEQ ID 5403; 44pp; English.
XX
CC   The present invention describes a method (M1) for screening for an
CC   anti-neoplastic agent. The method involves exposing cells to a chemical
CC   agent to be tested for anti-neoplastic activity, determining a change in
CC   expression of at least one gene (I) of a signature gene set, where (I)
CC   comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC   to ABL70110), or is at least 95% identical to (S), where a change in
CC   expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC   activity and can be used in gene therapy. M1 can be used for screening
CC   an anti-neoplastic agent, and can be used for producing a product which
CC   is the data collected with respect to the anti-neoplastic agent as a
CC   result of M1, and the data is sufficient to convey the chemical
CC   structure and/or properties of the agent. M1 can be used in the
CC   treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC   oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC   adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC   infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC   carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ   Sequence 1717 BP; 434 A; 428 C; 351 G; 504 T; 0 other;

  Query Match             100.0%;  Score 1065;  DB 24;  Length 1717;
  Best Local Similarity   100.0%;  Pred. No. 2e-313;
  Matches 1065;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
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Db     205 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 264

Qy      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
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Db     265 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 324

Qy     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
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Db     385 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 444

Qy     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
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Db     445 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 504

Qy     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
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Db     505 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 564

Qy     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     565 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 624

Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     625 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 684
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Qy    481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
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Db    685 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 744

Qy    541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
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Qy    601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
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Db    925 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 984

Qy    781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
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Db    985 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 1044

Qy    841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1045 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 1104

Qy    901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1105 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 1164

Qy    961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
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Db   1165 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1224

Qy   1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
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Db   1225 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1269
```

RESULT 10
AAD25221
ID AAD25221 standard; DNA; 1717 BP.
XX
AC AAD25221;
XX
DT 12-MAR-2002 (first entry)
XX
DE Human chemokine (C-C motif) receptor 3 (CCR3) gene #1.
XX
KW Human; chemokine (C-C motif) receptor 3; CCR3 gene; haplotyping;
KW genotyping; type IV hypersensitivity reaction; HIV-1; gene therapy;
KW human immunodeficiency virus 1; single nucleotide polymorphism; SNP;
KW chromosome 3p21.3; ds.
XX
OS Homo sapiens.
XX

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FT		/standard_name= "Single nucleotide polymorphism (SNP)"
FT	variation	replace (1256, C)
FT		/*tag= e
FT		/standard_name= "Single nucleotide polymorphism (SNP)"

XX
PN WO200187908-A2.
XX
PD 22-NOV-2001.
XX
PF 18-MAY-2001; 2001WO-US16278.
XX
PR 18-MAY-2000; 2000US-205191P.
XX
PA (GENA-) GENAISSANCE PHARM INC.
XX
PI Choi JY, Kazemi A, Koshy B;
XX
DR WPI; 2002-055681/07.
DR P-PSDB; AAE15320.
XX
PT Isolated polymorphic variants of chemokine (C-C motif) receptor 3
PT (CCR3) gene useful for studying function of CCR3, expressing the CCR3
PT protein and to screen drugs to treat CCR3 activity-related diseases -
XX
PS Example 1; Fig 1; 53pp; English.
XX
CC The invention relates to genetic variants of human chemokine (C-C motif)
CC receptor 3 (CCR3) gene. The invention also relates to compositions and
CC methods for haplotyping and/or genotyping the CCR3 gene in an individual.
CC Polynucleotides of the invention are useful for studying the expression
CC and function of CCR3 and in expressing CCR3 proteins for use in screening
CC candidate drugs to treat diseases related to CCR3 activity. They are also
CC used in gene therapy. The polymorphism and haplotype data is useful for
CC validating whether CCR3 is a suitable target for drugs to treat type IV
CC hypersensitivity reactions and human immunodeficiency virus (HIV)-1,
CC screening for such drugs and reducing bias cells in clinical trials of
CC such drugs. The genotyping method is useful for determining whether an
CC individual has one haplotype or haplotype pairs. The haplotyping method
CC is useful for improving the efficiency and outcome of several steps in
CC the discovery and development of drugs for treating diseases associated
CC with CCR3 activity such as type IV hypersensitivity reactions and HIV-1.
CC The present sequence is human CCR3 gene located on chromosome 3p21.3.
XX
SQ Sequence 1717 BP; 434 A; 428 C; 351 G; 504 T; 0 other;

Query Match 100.0%; Score 1065; DB 24; Length 1717;
Best Local Similarity 100.0%; Pred. No. 2e-313;
Matches 1065; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    205 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 264

Qy     61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    265 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 324

Qy    121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    325 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 384

Qy    181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    385 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 444

Qy    241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    445 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 504

Qy    301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    505 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 564

Qy    361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
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          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    565 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 624

Qy    421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    625 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 684

Qy    481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    685 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 744

Qy    541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    745 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 804

Qy    601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    805 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 864

Qy    661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    865 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 924

Qy    721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    925 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 984

Qy    781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    985 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 1044

Qy    841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1045 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 1104

Qy    901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
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Qy    961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
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Db   1165 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1224

Qy   1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
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Db   1225 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1269


RESULT 11
AAT85162
ID   AAT85162 standard; cDNA; 1915 BP.
XX
AC   AAT85162;
XX
DT   14-DEC-1997  (first entry)
XX
DE   Human chemokine receptor 88-2B cDNA.
XX
KW   Chemokine receptor 88-2B; atherosclerosis; rheumatoid arthritis;
KW   tumour; asthma; viral infection; AIDS; inflammation;
KW   autoimmune disease; therapy; diagnosis; leukocyte trafficking;
KW   G protein coupled receptor; human; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             362..1429
FT                   /*tag=  a
XX
PN   WO9722698-A2.
XX
PD   26-JUN-1997.
XX
PF   20-DEC-1996;   96WO-US20759.
XX
PR   07-JUN-1996;   96US-0661393.
PR   20-DEC-1995;   95US-0575967.
XX
PA   (ICOS-) ICOS CORP.
XX
PI   Gray PW,  Raport CJ,  Schweickart VL;
XX
DR   WPI; 1997-341689/31.
DR   P-PSDB; AAW27124.
XX
PT   New nucleic acid encoding chemokine receptors 88-2B and 88C - used
PT   to modulate leukocyte trafficking, e.g. for treatment of
PT   inflammation, tumours, viral infections, autoimmune diseases, etc.
XX
PS   Claim 7; Page 48-50; 65pp; English.
XX
CC   This sequence comprises a full-length cDNA coding for novel human
CC   chemokine receptor 88-2B (AAW27124), a G protein coupled receptor that
CC   is involved in leukocyte trafficking.  The 88-2B cDNA was obtained
CC   from a macrophage cDNA library using 88-2B-specific primers.  A
CC   full-length clone (see AAT89161) for chemokine receptor 88C (AAW27123)
CC   was also obtained.  88C and 88-2B cDNAs can be used to produce
CC   recombinant polypeptides in transformed host cells for use in the
CC   treatment of e.g. atherosclerosis, rheumatoid arthritis, tumours,
CC   asthma, viral infection, AIDS and inflammatory conditions.  Nucleic
CC   acid fragments can be used to isolate genomic sequences, to detect
CC   alleles of the gene (for diagnosis or in gene therapy), to alter
CC   receptor genetics to facilitate identification of modulators and to
CC   produce knockout animals, and (antisense forms) to alter/study the
CC   genetics and expression of the receptor.
XX
SQ   Sequence 1915 BP; 488 A; 470 C; 373 G; 584 T; 0 other;

  Query Match             100.0%;  Score 1065;  DB 18;  Length 1915;
  Best Local Similarity   100.0%;  Pred. No. 2.1e-313;
  Matches 1065;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
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Qy     61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    422 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 481

Qy    121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy    361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
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Db    782 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 841

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Db    842 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 901

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          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    902 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 961

Qy    601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    962 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 1021

Qy    661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1022 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 1081

Qy    721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1082 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 1141

Qy    781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1142 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 1201

Qy    841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1202 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 1261

Qy    901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1262 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 1321

Qy    961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1322 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1381

Qy   1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
          |||||||||||||||||||||||||||||||||||||||||||||
Db   1382 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1426
```

RESULT 12
AAF21269
ID AAF21269 standard; DNA; 3958 BP.
XX
AC AAF21269;
XX
DT 14-MAR-2001 (first entry)
XX
DE Human low adenosine antisense oligonucleotide related sequence #2836.
XX
KW Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
KW human; airway disorder; bronchoconstriction; lung inflammation;
KW surfactant depletion; respiratory; bronchodilator; antiinflammatory;
KW immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
KW respiratory obstruction; pulmonary obstruction; impeded respiration;
KW surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS;
KW respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
KW pulmonary hypertension; emphysema; pulmonary transplantation rejection;
KW chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
KW cancer; ss.
XX
OS Homo sapiens.
XX
PN WO200062736-A2.
XX
PD 26-OCT-2000.
XX
PF 24-MAR-2000; 2000WO-US08020.
XX
PR 06-APR-1999; 99US-0127958.
XX
PA (UYEC-) UNIV EAST CAROLINA.
PA (NYCE/) NYCE J W.
XX
PI Nyce JW;
XX
DR WPI; 2000-679539/66.
XX
PT Low adenosine (A) content antisense oligonucleotides which do not
PT trigger adenosine receptors during metabolism, useful e.g. for treating
PT cancers and respiratory obstructions -
XX
PS Disclosure; Page 1183-1184; 1592pp; English.
XX
CC The present invention describes low adenosine (A) content antisense
CC oligonucleotides and compositions (I) comprising them. In the antisense
CC oligonucleotides the A is replaced by a 'Universal' or alternative base.
CC (I) can have respiratory, bronchodilator, antiinflammatory, analgesic,
CC immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.
CC The antisense oligonucleotides and (I) can be used to down-regulate the
CC expression and or activity of target polypeptides associated with
CC lung/respiratory disorders and malignancies, such as stimulating and
CC activating peptide factors and transmitters, transcription factors,
CC immunoglobulins and antibodies, antibody receptors, cytokines and
CC chemokines, endogenously produced specific and non-specific enzymes,
CC binding proteins, adhesion molecules and their receptors, cytokine and
CC chemokine receptors, adenosine receptors, bradykinin receptors, central
CC nervous system (CNS) and peripheral nervous and non-nervous system
CC receptors, CNS and peripheral nervous and non-nervous system peptide
CC transmitters, defensins, growth factors, vasoactive peptides and
CC receptors, binding proteins and malignancy associated proteins. The
CC antisense oligonucleotides may be used in this way to treat disorders
CC including respiratory obstruction (especially pulmonary obstruction
CC and/or bronchoconstriction) and/or lung inflammation, allergy(ies)
CC and/or surfactant hypoproduction which are associated with a disease or
CC condition selected from pulmonary vasoconstriction, inflammation,
CC allergies, asthma, impeded respiration, respiratory distress syndrome
CC (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
CC hypertension, emphysema, chronic obstructive pulmonary disease (COPD),
CC pulmonary transplantation rejection, pulmonary infections, bronchitis,
CC and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
CC fragments and antisense oligonucleotides used in the exemplification of
CC the present invention.
XX
SQ Sequence 3958 BP; 939 A; 1025 C; 855 G; 1138 T; 1 other;

Query Match 100.0%; Score 1065; DB 21; Length 3958;
Best Local Similarity 100.0%; Pred. No. 3.2e-313;
Matches 1065; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60

Qy     61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120

Qy    121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180

Qy    181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240

Qy    241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300

Qy    301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360

Qy    361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
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Qy    421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480

Qy    481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540

Qy    541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600

Qy    601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660

Qy    661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720

Qy    721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780

Qy    781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840

Qy    841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900

Qy    901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960

Qy    961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020

Qy   1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
          |||||||||||||||||||||||||||||||||||||||||||||
Db   1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
```

RESULT 13
AAA35147
ID AAA35147 standard; DNA; 3958 BP.
XX
AC AAA35147;
XX
DT 28-JUL-2000 (first entry)
XX
DE Human adenosine receptor related polynucleotide 2nd SEQ ID NO:21.
XX
KW Human; adenosine receptor; low adenosine antisense oligonucleotide;
KW phosphorothioate; impaired respiration; inflammation; allergy;
KW allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
KW antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway;
KW lung disease; ischaemic condition; pulmonary vasoconstriction; asthma;
KW respiratory distress syndrome; pain; cystic fibrosis; emphysema;
KW pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
KW cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
XX
OS Homo sapiens.
XX
PN WO200009525-A2.
XX
PD 24-FEB-2000.
XX
PF 03-AUG-1999; 99WO-US17712.
XX
PR 03-AUG-1998; 98US-0095212.
XX
PA (UYEC-) UNIV EAST CAROLINA.
XX
PI Nyce JW;
XX
DR WPI; 2000-205971/18.
XX
PT New antisense oligonucleotides useful for treating e.g. pulmonary
PT vasoconstriction, inflammation, allergies, asthma, hypertension,
PT bronchitis, emphysema, respiratory distress syndrome, ischemia or
PT cancers
XX
PS Disclosure; Page 1103-1104; 1343pp; English.
XX
CC The present invention describes a new composition comprising an
CC antisense oligonucleotide (ON) with low adenosine (up to 15%), which
CC targets nucleic acids involved in bronchoconstriction, allergies, and/or
CC inflammation. The ON can have antiinflammatory, antiallergic,
CC antiasthmatic, cytostatic and analgesic activities. The compositions are
CC useful for the treatment of diseases associated with inflammation,
CC impaired airways, including lung disease and diseases whose secondary
CC effects afflict the lungs of a subject. They can be used for treating
CC e.g. ischaemic conditions, pulmonary vasoconstriction, allergies,
CC asthma, impeded respiration, respiratory distress syndrome, pain, cystic
CC fibrosis, pulmonary hypertension, emphysema, chronic obstructive
CC pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
CC carcinomas, and cancers which may metastasise to the lungs, including
CC breast and prostate cancer. The reduction of the adenosine content of
CC the ONs reduces side effects. The A-containing ONs break down with the
CC release of deoxyadenosine which activates adenosine receptors causing
CC bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
CC nucleotide sequences given in the sequence listing from the present
CC invention, which correspond to SEQ ID NO:1 to 2815, and then the last
CC 185 sequences are also called SEQ ID NO:1 to 185, but the sequences
CC differ from the previously named sequences. SEQ ID NO:11 to 1680
CC (AAA32323 to AAA33992) are specifically claimed ONs from the present
CC invention. N.B. Sequences given in the disclosure of the present
CC invention do not match up with their corresponding SEQ ID NO: sequences
CC given in the sequence listing.
XX
SQ Sequence 3958 BP; 939 A; 1025 C; 855 G; 1138 T; 1 other;

Query Match 100.0%; Score 1065; DB 21; Length 3958;
Best Local Similarity 100.0%; Pred. No. 3.2e-313;
Matches 1065; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60

Qy     61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120

Qy    121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180

Qy    181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240

Qy    241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300

Qy    301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360

Qy    361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420

Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480

Qy     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540

Qy     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600

Qy     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660

Qy     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720

Qy     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780

Qy     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840

Qy     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900

Qy     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960

Qy     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020

Qy    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
           |||||||||||||||||||||||||||||||||||||||||||||
Db    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
```

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RESULT 14
AAT93601
ID   AAT93601 standard; cDNA; 5099 BP.
XX
AC   AAT93601;
XX
DT   07-MAY-1998  (first entry)
XX
DE   Human eosinophil eotaxin receptor CC CKR3 encoding cDNA.
XX
KW   Eosinophil eotaxin receptor; CC CKR3; human; treatment; dermatitis;
KW   atopic condition; allergic rhinitis; conjunctivitis; bronchial asthma;
KW   beta-chemokine receptor; viral infection; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   misc_feature    1..3586
FT                   /*tag= a
FT                   /note= "5' genomic DNA flanking sequence"
FT   CDS             3587..4654
FT                   /*tag= b
FT                   /product= "human eosinophil eotaxin receptor"
FT   misc_feature    4655..5099
FT                   /*tag= c
FT                   /note= "terminator region"
XX
PN   WO9741154-A1.
XX
PD   06-NOV-1997.
XX
PF   24-APR-1997;   97WO-US06568.
XX
PR   17-JAN-1997;   97GB-0000894.
PR   26-APR-1996;   96US-0016158.
PR   26-APR-1996;   96US-0017113.
XX
PA   (MERI ) MERCK & CO INC.
XX
PI   Daugherty BL,  Demartino JA,  Siciliano SJ,  Springer MS;
XX
DR   WPI; 1997-549685/50.
DR   P-PSDB; AAW31850.
XX
PT   New isolated human eosinophil eotaxin receptor - used to develop
PT   products for treating and preventing atopic conditions e.g. allergic
PT   rhinitis, dermatitis, conjunctivitis and bronchial asthma
XX
PS   Claims 12, 13, 14; Pages 16-20; 51pp; English.
XX
CC   This cDNA encodes a human eosinophil eotaxin receptor. This 5099 base
CC   pair sequence comprises a 1065 base pair open reading frame encoding a
CC   355 amino acid eosinophil eotaxin receptor protein, flanked by a 5'
CC   genomic DNA sequence and a 3' terminator region. This novel eosinophil
CC   eotaxin receptor is a human beta-chemokine receptor designated CC CKR3.
CC   Agents which bind to this eosinophil eotaxin receptor can be used for
CC   the treatment and prevention of atopic conditions such as allergic
CC   rhinitis, dermatitis, conjunctivitis and bronchial asthma. Agents which
CC   block this eosinophil eotaxin receptor can be used to prevent viral
CC   infection in healthy individuals and slow or halt viral progression
CC   in infected patients.
XX
SQ   Sequence 5099 BP; 1388 A; 1171 C; 1013 G; 1527 T; 0 other;
```

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  Query Match             100.0%;  Score 1065;  DB 18;  Length 5099;
  Best Local Similarity   100.0%;  Pred. No. 3.6e-313;
  Matches 1065;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    3587 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 3646

Qy      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    3647 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 3706

Qy     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    3707 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 3766

Qy     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    3767 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 3826

Qy     241 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    3827 CTGCTCTTCCTCGTCACCCTTCCATTCTGGATCCACTATGTCAGGGGGCATAACTGGGTT 3886

Qy     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    3887 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 3946

Qy     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    3947 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 4006

Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    4007 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 4066
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Qy     481 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 540
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Db    4067 GCAGTGCTAGCAGCTCTTCCTGAATTTATCTTCTATGAGACTGAAGAGTTGTTTGAAGAG 4126

Qy     541 ACTCTTTGCAGTGCTCTTTACCCAGAGGATACAGTATATAGCTGGAGGCATTTCCACACT 600
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Qy     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
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Qy     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
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Qy    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
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RESULT 15
AAD25245
ID   AAD25245 standard; DNA; 1717 BP.
XX
AC   AAD25245;
XX
DT   12-MAR-2002  (first entry)
XX
DE   Human chemokine (C-C motif) receptor 3 (CCR3) gene #2.
XX
KW   Human; chemokine (C-C motif) receptor 3; CCR3 gene; haplotyping;
KW   genotyping; type IV hypersensitivity reaction; HIV-1; gene therapy;
KW   human immunodeficiency virus 1; polymorphism; chromosome 3p21.3; ds.
XX
OS   Homo sapiens.
XX
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FT                   /note= "This degenerate base represents polymorphic
FT                   site (PS) 4"
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XX
PD   22-NOV-2001.
XX
PF   18-MAY-2001; 2001WO-US16278.
XX
PR   18-MAY-2000; 2000US-205191P.
XX
PA   (GENA-) GENAISSANCE PHARM INC.
XX
PI   Choi JY,  Kazemi A,  Koshy B;
XX
DR   WPI; 2002-055681/07.
XX
PT   Isolated polymorphic variants of chemokine (C-C motif) receptor 3
PT   (CCR3) gene useful for studying function of CCR3, expressing the CCR3
PT   protein and to screen drugs to treat CCR3 activity-related diseases -
XX
PS   Claim 5; Page 53; 53pp; English.
XX
CC   The invention relates to genetic variants of human chemokine (C-C motif)
CC   receptor 3 (CCR3) gene. The invention also relates to compositions and
CC   methods for haplotyping and/or genotyping the CCR3 gene in an individual.
CC   Polynucleotides of the invention are useful for studying the expression
CC   and function of CCR3 and in expressing CCR3 proteins for use in screening
CC   candidate drugs to treat diseases related to CCR3 activity. They are also
CC   used in gene therapy. The polymorphism and haplotype data is useful for
CC   validating whether CCR3 is a suitable target for drugs to treat type IV
CC   hypersensitivity reactions and human immunodeficiency virus (HIV)-1,
CC   screening for such drugs and reducing bias cells in clinical trials of
CC   such drugs. The genotyping method is useful for determining whether an
CC   individual has one haplotype or haplotype pairs. The haplotyping method
CC   is useful for improving the efficiency and outcome of several steps in
CC   the discovery and development of drugs for treating diseases associated
CC   with CCR3 activity such as type IV hypersensitivity reactions and HIV-1.
CC   The present sequence is human CCR3 gene located on chromosome 3p21.3.
XX
SQ   Sequence 1717 BP; 434 A; 427 C; 350 G; 502 T; 4 other;
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  Query Match             99.9%;  Score 1064.2;  DB 24;  Length 1717;
  Best Local Similarity   99.8%;  Pred. No. 3.5e-313;
  Matches 1063;  Conservative    2;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATGACAACCTCACTAGATACAGTTGAGACCTTTGGTACCACATCCTACTATGATGACGTG 60
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Qy      61 GGCCTGCTCTGTGAAAAAGCTGATACCAGAGCACTGATGGCCCAGTTTGTGCCCCCGCTG 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy     121 TACTCCCTGGTGTTCACTGTGGGCCTCTTGGGCAATGTGGTGGTGGTGATGATCCTCATA 180
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Qy     181 AAATACAGGAGGCTCCGAATTATGACCAACATCTACCTGCTCAACCTGGCCATTTCGGAC 240
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Qy     301 TTTGGCCATGGCATGTGTAAGCTCCTCTCAGGGTTTTATCACACAGGCTTGTACAGCGAG 360
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Qy     361 ATCTTTTTCATAATCCTGCTGACAATCGACAGGTACCTGGCCATTGTCCATGCTGTGTTT 420
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Qy     421 GCCCTTCGAGCCCGGACTGTCACTTTTGGTGTCATCACCAGCATCGTCACCTGGGGCCTG 480
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Qy     601 CTGAGAATGACCATCTTCTGTCTCGTTCTCCCTCTGCTCGTTATGGCCATCTGCTACACA 660
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Qy     661 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 720
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Db     865 GGAATCATCAAAACGCTGCTGAGGTGCCCCAGTAAAAAAAAGTACAAGGCCATCCGGCTC 924

Qy     721 ATTTTTGTCATCATGGCGGTGTTTTTCATTTTCTGGACACCCTACAATGTGGCTATCCTT 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy     781 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 840
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Db     985 CTCTCTTCCTATCAATCCATCTTATTTGGAAATGACTGTGAGCGGAGCAAGCATCTGGAC 1044

Qy     841 CTGGTCATGCTGGTGACAGAGGTGATCGCCTACTCCCACTGCTGCATGAACCCGGTGATC 900
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Qy     901 TACGCCTTTGTTGGAGAGAGGTTCCGGAAGTACCTGCGCCACTTCTTCCACAGGCACTTG 960
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Qy     961 CTCATGCACCTGGGCAGATACATCCCATTCCTTCCTAGTGAGAAGCTGGAAAGAACCAGC 1020
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Qy    1021 TCTGTCTCTCCATCCACAGCAGAGCCGGAACTCTCTATTGTGTTT 1065
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